

Operating and Maintenance Instructions

WARNINGS



TORNADO system users must be familiar with workplace hazards prior to using the equipment and must be fully trained in the use of the apparatus.



TORNADO head-tops must be used with a T/POWER blower or T/A/LINE. Read this Manual and the T/A/LINE or T/POWER and T/FILTER User Manuals, prior to using the equipment.



T/POWER must be fitted with filters selected from the TORNADO range of filters which are appropriate for the workplace hazard.



This product must only be used with Protector-branded filters manufactured by Scott Health and Safety Limited. The use of any other filters will negate the approval and will be likely to reduce the level of protection provided.



DO NOT confuse the EN 12941 and EN 12942 TORNADO filter markings with filter markings relating to other EN standards.



DO NOT use T5 in confined spaces, oxygen deficient atmospheres (<19.5%), oxygen enriched atmospheres (>23%) or where there is an immediate hazard to life or health.



DO NOT use if the ambient temperature is outside of the range -10°C to +50°C. Humidity levels up to 95% RH do not present any operational problems.



T5 helmets are safe to use at -30°C. The respiratory equipment **MUST NOT** be used below -10°C.



DO NOT use if the apparatus is damaged. The head-top and air hose must be inspected on every occasion before use to ensure that no damage of any kind is evident, (e.g. chemical damage, splits or broken stitching), which could cause leakage or reduced levels of protection. A monthly inspection of the apparatus is a mandatory requirement in the UK under COSHH regulations and inspection on a monthly basis is strongly recommended for all other countries.



Protection will only be obtained if the unit is fitted correctly.



Protection levels may be reduced if wind speed exceeds 2 metres per second.



In the unlikely event that T/POWER or T/A/LINE fails while in a hazardous area, there may be a depletion of oxygen within the head-top. DO NOT remove the head-top, LEAVE THE AREA IMMEDIATELY.



TORNADO head-tops can be used in certain explosive and flammable atmospheres when used with T/POWER which is marked as intrinsically safe. It is the employer's responsibility to ensure that the intrinsic safety approval is compatible with the particular environment.



At very high workrates, pressure in the device may become negative at peak inhalation flow.



Filters must not be fitted directly to the helmet/hood.

TORNADO T5

SPECIFICATION

| | | |
|---|------------------------------|--|
| Description: | | Helmet-mounted visor with optional ear defenders |
| Classification when used with: | T/POWER T/A/LINE Visor | EN 12941 TH2 EN 1835 LDH3 EN 166 |
| Minimum Design Flow Rate: | | 140 L/min |
| Assigned* (Nominal) Protection Factor when used with: | T/POWER T/A/LINE | 20 (50) 40 (200) |
| Operating Temperature Limits: | | -10°C to +50°C |
| Material: | Visor | Polycarbonate or Acetate options |
| Weight: | | 890 Grams |

* According to EN 529 : 2005

MARKINGS AND MEANINGS

Helmet Markings:

| Marking | Meaning |
|---------------|--|
| SHS Protector | Manufacturer's identification mark |
| Tuffmaster II | Helmet type |
| T5 | Apparatus type |
| CE | CE mark |
| 0086 | Certifying body |
| TH2 | Class designation - EN 12941 |
| LDH3 | Class designation - EN 1835 |
| EN166-B9 | Standard for level of eye protection |
| EN175 | Standard of eye protection for welding visor |
| EN397 | Helmet certification |
| 50 - 64cm | User head size: lower and upper limits |
| -30°C | Very low temperature |
| MM | Helmet molten metal classification |
| 440V a.c. | Electrical insulation |

Visor Markings:

Markings and Meanings as stated in EN 166 : 1995.

WARNING:

If the visor and helmet do not carry the same markings relating to impact resistance, the lower level of protection should be used.

The following markings appear on the visor:

SHS 1B9 CE

or

SHS 1F CE

| Marking | Meaning |
|---------|------------------------------------|
| SHS | Manufacturer's identification mark |
| 1 | Optical class 1 |
| 9 | Resistance to molten metals |
| B | Medium energy impact |
| F | Low energy impact |
| CE | CE mark |

WEARING

Note:

Remove the protective transit film from the outside and inside surfaces of the visor before donning.

CAUTION:

- It is difficult to predict the life of visors or helmets in use. In everyday use, and particularly when used outdoors, we would recommend that visors or helmets are discarded after two years service. In some extreme instances there may be deterioration over a shorter period of time. For indoor or occasional use we would anticipate a service life of about five years, provided that the equipment is stored in cool dry conditions out of direct sunlight.

- Whilst all the materials which may come into contact with the wearer's skin are not known to be likely to cause skin irritation or any other adverse effect to health, they may cause allergic reactions in particularly susceptible individuals.
- Regardless of the above recommendations, the visor or helmets should be examined for damage such as deep scratches, abrasions, cracks, etc. before use and should also be examined for deterioration. Damaged parts which have come into contact with solvents and parts which have received significant impact should be replaced.

1. Check that the head-top is in good condition and free from damage that might reduce respiratory protection and that the visor is free from blemishes that might impair vision.
2. Check that the helmet and helmet cradle are in good condition and free from cracks or crazing. Flex the helmet and check that crazing does not appear.
3. Loosen the head harness using the handwheel at the back of the harness and put on the facepiece, slipping the faceseal under the chin.
4. Tighten the handwheel so that the head harness fits comfortably over the forehead. It may be necessary to adjust the helmet cradle so that visor is at the correct height. If the cradle is adjusted the head-top fit must be re-adjusted.
5. Pull the facepiece back so that it fits comfortably and securely under the chin and around the cheeks and the faceseal around the head, above the ears and below the head harness.
6. Arrange the air hose so that it trails freely down the back and is not kinked or looped; and not likely to snag. Please refer to the **T/POWER** or **T/A/LINE** User Manual for further information.

AFTER USE

1. DO NOT remove the head-top until safely clear of the hazardous area. Observe any site decontamination procedures.
2. Disconnect the air hose and use a synthetic sponge moistened in a warm soap and water solution to clean the head-top and air hose. DO NOT permit water to enter the air hose.
3. Rinse the sponge in clean water and remove all traces of soap from the apparatus.
4. Allow the head-top to dry in air at room temperature. DO NOT store until thoroughly dry. DO NOT use heat or sunlight to dry the apparatus. DO NOT scratch the visor.
5. Replace damaged items or apparatus.

STORAGE

When not in use, the equipment should be stored in a clean, dry environment, away from direct heat sources between +10°C and +30°C, at a humidity of less than 65% RH.

MAINTENANCE

Carry out a thorough inspection of all component parts before and after each occasion of use, paying particular attention to the exhale valve flap. The valve flap must be replaced annually regardless of condition. Valve flaps in storage have a shelf-life of five years, after which time they should be discarded.

Exhalation valve flaps are marked with a code indicating the year of manufacture. The code '07' corresponds to 2007 and a dot is added each year thereafter, so '07.' would equate to 2008.

RECORD INSPECTION AND MAINTENANCE DETAILS

Record test and maintenance details on the Inspection and Maintenance Record Sheet provided at the back of this Manual.

Information recorded usually includes:

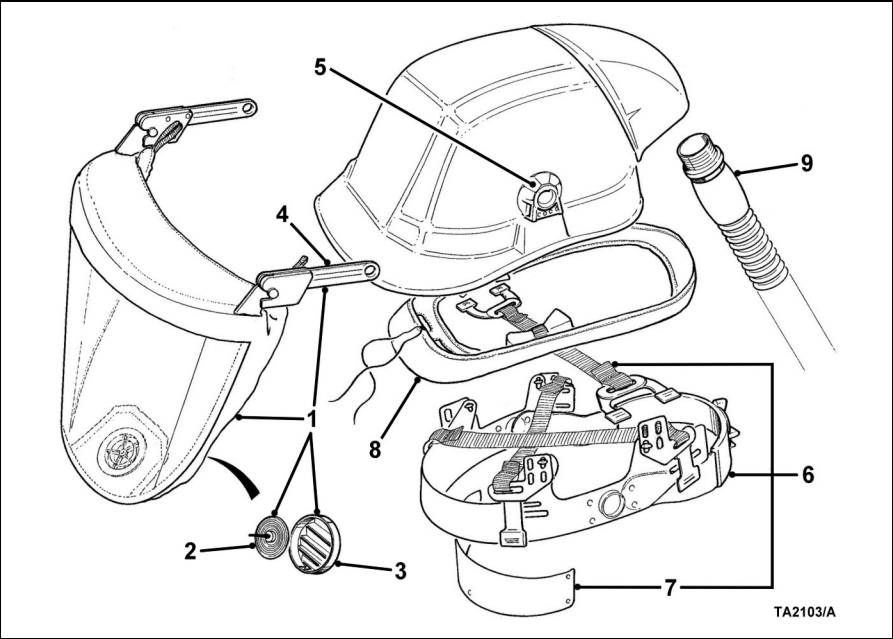
- Name of employer responsible for the apparatus.
- Make, model number or identification mark of the apparatus, together with a description of any distinguishing features, sufficient to enable clear identification.
- Date of the inspection/maintenance together with the name, signature or unique authentication mark of the examiner.
- Condition of the apparatus, details of any defects found and any remedial action taken.

NOTIFIED BODIES

Inspec International Limited (0194)
56 Leslie Hough Way,
Salford,
Greater Manchester,
M6 6AJ,
England.

BSI Product Services (0086)
Kitemark House,
Maylands Avenue,
Hemel Hempstead,
HP2 4SQ,
England.

SPARE PARTS



| Item No. | Description | | Part No. |
|----------|---------------------|---------------|-------------|
| 1 | Visor | Polycarbonate | T5/VISOR/PC |
| 1 | Visor | Acetate | T5/VISOR/AC |
| 2 | Exhale Valve Flap | (Pack of 2) | TOR/VALVE |
| 3 | Exhale Valve Cover | (Pack of 5) | 2017146 |
| 4 | Carrier Arm | (Pack of 2) | TOR/5/ARM |
| 5 | Visor Mounting Post | | FXVP30 |
| 6 | Head Harness | | HXHG71RH |
| 7 | Sweatband | (Pack of 20) | HXSB40T |
| 8 | Brim Trim | (Pack of 3) | T5/BT |
| 9 | Breathing Hose | | T/HOSE/EPDM |

FITTING SPARES

To Replace the Visor:

Release the elastic loops from the head harness, tilt the visor fully up until the visor is released from side arm. Pull the exhale valve from the faceseal and fit to the new visor faceseal. Check that the faceseal is fully located around the valve body. Locate the visor to the side arms in a tilted-up attitude and tilt downward to clip into place.

To Replace a Carrier Arm:

Use side clip to release carrier arm and withdraw arm from pivot post. Slide new carrier arm into pivot post and secure with side clip.

To Replace the Hose:

Unscrew the old hose from the duct and screw in the new one.

To Replace the Exhale Valve:

Pull the valve cover from the valve body and pull the exhale valve flap from its housing. Fit the replacement valve flap by pulling the stem back through the hole until it clicks into place. Check that the valve flap lies flat on the frame in the valve body. The sealing edge of the valve should be checked to ensure that it is perfectly clean and free from damage.

Align the valve cover with the slots in the valve body and press together so that the cover engages into the location groove on the outside edge of the body.

CAUTION:

Do not force the cover beyond the location groove in the valve body or performance of the exhale valve will be impaired. In the event of a cover being incorrectly fitted, remove the cover and refit correctly.

To Replace the Sweatband:

Pull the old sweatband from the head harness hooks. Fit the new sweatband onto the 5 hooks in the lower front of the headband, fold across that part of the headband nearest the head and clip on to the 2 hooks at the top of the headband.

To Replace the Head Harness:

Tilt the visor to the fully-up position. Press down on the white retaining tabs to release the head harness from the helmet and remove the old harness from the helmet. Insert the white head harness retaining tabs into the slots in the rim of the helmet. Tilt the visor to the required position.

To Replace the Brim Trim:

Release the faceseal elastic loops from the head harness and untie the retaining cord of the old brim trim and remove it from the helmet. Locate the rectangular slots in the new brim trim over the ducts at the front of the helmet, arrange the brim trim around the brim of the helmet with the sponge pads tucked under the helmet brim and tie the retaining cord.

WARRANTY

The products manufactured at our factories in Skelmersdale and Vaasa carry a warranty of 12 months (unless stated otherwise) for parts, labour and return to site. The warranty period runs from the date of purchase by the end user.

These products are warranted to be free from defects in materials and workmanship at the time of delivery.

SCOTT will be under no liability for any defect arising from wilful damage, negligence, abnormal working conditions, failure to follow the original manufacturer's instructions, misuse or unauthorised alteration or repair.

Evidence of purchase date will need to be provided for any claims arising during the warranty period. All warranty claims must be directed through **SCOTT Customer Services** and in accordance with our sales return procedure.